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Jan 11, 2000

DOCUMENT-IDENTIFIER: US 6014650 A

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TITLE: Purchase management system and method

Abstract Text (1):

A system and method of implementing a secure purchase management system wherein a unique account code is assigned to a purchaser; a set of secret transaction codes are provided to the purchaser, one secret transaction code to be <u>used</u> for each individual purchase to be made by the purchaser; and each purchase request from a purchaser is verified to make sure it includes the purchaser's account code and a transaction code which has not been <u>used</u> before to thereby prevent unauthorized purchases and fraud.

<u>US Patent No.</u> (1):

Brief Summary Text (13):

This invention results from the realization that a truly simple but foolproof purchasing security system can be effected by assigning a unique account identifier to each purchaser and a unique set of secret transaction codes associated with that transaction identifier, each secret transaction code to be used once and only once for a single purchase with that transaction identifier so that each purchase is verified by an account identifier and a secret transaction code to thwart unauthorized charges against that unique transaction identifier. Additional secret transaction codes are added as the secret ones are used up.

Brief Summary Text (14):

A purchaser is provided with an ordered series of, secret transaction codes in addition to an account identifier and is instructed that each transaction code is to be only used in order for a single purchase and then never used again. Thus, even if the account identifier and a transaction code is stolen, the thief will be unsuccessful in any attempt to use the stolen transaction code because the account manager can easily verify the fact that the transaction code has already been used. The series of transaction codes as a group are provided to the purchaser in a method external to the internet to prevent unauthorized interception of the transaction codes. Then, since one transaction code is only authorized for use for a single purchase over the internet, the fact that it is wrongfully intercepted or stolen becomes irrelevant since the account manager will not authorize another purchase to be made using the stolen transaction code.

Brief Summary Text (15):

This invention features a method of implementing a secure purchase management system. The method comprises assigning a unique account code to a purchaser; providing a set of secret transaction codes to the purchaser; one secret transaction code for each individual purchase to be made by the purchaser; and verifying that a purchase request from a purchaser includes the purchaser's account code and a transaction code which has not been <u>used</u> before to thereby prevent unauthorized purchases and fraud.

Brief Summary Text (16):

When purchases are made via a computerized network such as the internet, the step of



providing the set of unique transaction codes to the purchaser includes supplying the transaction codes to the purchaser via a medium external to the computerized network (e.g., via the mail) to prevent fraudulent interception of the transaction codes. The method preferably also includes the step of checking the purchaser's account balance upon receiving a purchase request. The step of providing secret transaction codes may include the use of a random number generator. The transaction codes are typically in used in order and deleted after use.

Brief Summary Text (17):

The computerized purchase management system of this invention includes means for assigning a unique account code to a purchaser; means for providing a set of secret transaction codes to the purchaser, one transaction code for each individual purchase to be made by the purchaser; a database including the purchaser's account code and secret transaction codes; and means, responsive to the database, for verifying that a purchase request from a purchaser includes the purchaser's account code and a transaction code which has not been <u>used</u> before to thereby prevent unauthorized purchases and fraud.

Brief Summary Text (18):

The database typically further includes the purchaser's account balance and the system further includes means for checking the purchaser's account balance upon the receipt of a purchase request. The means for providing may include a computerized random number generator. The means for verifying preferably includes means for deleting each secret transaction code from the database after they are <u>used</u> by the purchaser.

Detailed Description Text (2):

In the prior art, purchaser 20 makes a purchase request by accessing the seller's web page and then transmitting a credit card number via e-mail or the like to internet seller to complete the transaction. As discussed in the Background of the Invention above, however, this channel of communication is not secure and the purchaser's credit card number can be easily intercepted resulting in possible fraud which might not be detected until the credit card is wrongfully used a number of times.

Detailed Description Text (6):

In this invention, purchaser 20 then makes a purchase request to internet seller 18, FIG. 1, as graphically shown over communication line 24. This purchase request includes the purchaser's account code 30 (e.g. 12345), FIG. 2, and a transaction code 32 (e.g. 6789) which has not been used before. Internet seller 18, FIG. 1, then places a request via communication channel 26 to account manager 22. Computer software operating at the site of account manager 22, discussed in more detail with reference to FIG. 3, then accesses the database and verifies the authenticity of the account code and the transaction code, and compares the purchase amount to the purchaser's balance to check the sufficiency of the funds available.

Detailed Description Text (8):

If the transaction code has been <u>used</u> before, or if the transaction code is not the next available transaction code in the ordered series, computer software operating at the site of account manager 22 automatically rejects the authorization request. In this way, even if the transaction code is intercepted, when that transaction code is attempted to be <u>used</u> again, the purchase request will be rejected.

Detailed Description Text (9):

For example, if the purchaser seeks a \$50.00 authorization for a purchase using first transaction code 32 (6789), FIG. 2 transmitted over the internet and then makes a \$30.00 purchase request using second transaction code 34 (101112), and even if both transaction codes are intercepted, their wrongful use will be detected since they are both automatically deleted from the account manager's database after each purchase is made. The same is true if transaction code 37 is attempted to be used out of order and before the next available transaction code in the ordered series, in this example, transaction code 36.

Detailed Description Text (11):

Verification routine 50, FIG. 3 operates on a computer at the site of account



manager 22, FIG. 1, in accordance with this invention as follows. Database 52 is established which, for each account holder, includes an account code and the plurality of transaction codes as discussed above. The account codes are for purchase identification purposes and may be generated and assigned to the individual or corporate purchasers by means known in the art similar to assigning a credit card number. In this invention, however, there are also means for providing a series of secret, unique, predetermined, and typically random transaction codes to each purchaser such as a computerized random number generator. Note that this feature of the invention is different from assigning a single personal identification number (PIN) or password that can be wrongfully intercepted when transmitted over the internet and then used to defraud the purchaser and/or creditors.

Detailed Description Text (14):

If the account code is valid, the transaction code is verified, step 62. In this step, the account holder's next available transaction code is compared with the transaction code received in the request since all previous transaction codes will have been automatically deleted as discussed below. Also verified in step 62 is the fact that the next available transaction code in the ordered series of transaction codes is being correctly used.

Detailed Description Text (16):

If the transaction code is valid, then the sufficiency of the funds available may be checked, step 68, and if so an approval message generated and transmitted, step 70. The amount authorized is then automatically debited from the balance in database 52, step 72 and the transaction code <u>used</u> for that purchase is automatically deleted from database 52, step 74 to prevent its authorized re-use as discussed above. The transaction code may also be deleted if there is an indication of insufficient funds, step 76, in a like fashion. A rejection message is then generated, step 77 and transmitted, step 79.

Detailed Description Text (17):

Thus, the purchaser is forced to use the next available transaction code in the ordered series of transaction codes stored in the database and any attempt to use the different transaction code in the sequence or an transaction code which has been used before will result in an automatic rejection, step 62. In this way, since only the purchaser knows all the transaction codes and which transaction codes have been used before and since the transaction codes are provided to the purchaser in a secure fashion and not over the internet, then even if a transaction code is intercepted when it is transmitted over the internet to make a purchase, unlike a pin number or a password, its use will not generate a purchase approval. The result is a secure internet purchase management system and method which facilitates the use of the internet to conduct commerce.

CLAIMS:

 $1.\ A$ method of implementing a secure purchase management system, the method comprising:

assigning a unique account code to a purchaser;

providing a set of secret transaction codes to the purchaser, one secret transaction code for each individual purchase to be made by the purchaser; and

verifying that a purchase request from a purchaser includes the purchaser's account code and a transaction code which has not been <u>used</u> before to thereby prevent unauthorized purchases and fraud.

- 6. The method of claim 1 in which the step of providing secret transaction codes includes providing a series of transaction codes to the purchaser to be $\underline{\text{used}}$ in order.
- 7. The method of claim 6 further including the step of deleting a transaction code after it is used by the purchaser.
- 8. A computerized purchase management system comprising:

means for assigning a unique account code to a purchaser;

means for providing a set of secret transaction codes to the purchaser, one transaction code for each individual purchase to be made by the purchaser;

a database including the purchaser's account code and secret transaction codes; and

means, responsive to the database, for verifying that a purchase request from a purchaser includes the purchaser's account code and a transaction code which has not been used before to thereby prevent unauthorized purchases and fraud.

11. The system of claim 8 in which the means for verifying includes means for deleting each secret transaction code from the database after they are \underline{used} by the purchaser.